

CLAIMS

1. A packet duplication system, comprising:
an input port configured to receive a packet; and
a plurality of output ports configured to output the packet, wherein:
a number of duplications of the packet for each of the plurality of output ports is controlled by descriptors arranged in a linked-list table.
2. The packet duplication system of claim 1, wherein:
each of the number of duplications is coupled to a Virtual Local Area Network (VLAN).
3. The packet duplication system of claim 1, wherein:
an encoding format of the descriptors includes at least one of:
a contiguous range encoding;
a non-contiguous range encoding; and
a discrete encoding.
4. The packet duplication system of claim 1, wherein:
the descriptors arranged in the linked-list table include at least one shared descriptor.
5. The packet duplication system of claim 1, further comprising:
a pointer table having a width comprising a plurality of entries coupled to the linked-list table.
6. The packet duplication system of claim 5, wherein:
each of the plurality of entries corresponds to one of the plurality of output ports.
7. The packet duplication system of claim 3, wherein:
the contiguous range encoding includes a starting Virtual Local Area Network (VLAN) indicator and an ending VLAN indicator.
8. The packet duplication system of claim 3, wherein:

the non-contiguous range encoding includes a most significant bit (MSB) portion of a Virtual Local Area Network (VLAN) indicator and a bitmap decoded from a least significant bit (LSB) portion of the VLAN indicator.

9. The packet duplication system of claim 3, wherein:
the discrete encoding includes a first Virtual Local Area Network (VLAN) indicator and a second VLAN indicator.
10. The packet duplication system of claim 3, wherein:
the encoding format is configured to be selected in response to control bits.
11. A method of controlling a duplication of a packet, comprising:
receiving the packet;
accessing a first pointer;
accessing a second pointer;
accessing a descriptor in response to the second pointer; and
applying an encoding for the duplication of the packet.
12. The method of controlling the duplication of the packet of claim 11, further comprising:
performing a hashing function.
13. The method of controlling the duplication of the packet of claim 11, wherein:
applying the encoding includes:
selecting a format of descriptors, wherein the format includes at least one of:
a contiguous range encoding;
a non-contiguous range encoding; and
a discrete encoding.
14. The method of controlling the duplication of the packet of claim 11, wherein:
each of a number of duplications is coupled to a Virtual Local Area Network (VLAN).
15. The method of controlling the duplication of the packet of claim 11, wherein:
the descriptor includes a shared descriptor.

16. The method of controlling the duplication of the packet of claim 13, wherein:
the contiguous range encoding includes a starting Virtual Local Area Network (VLAN) indicator and an ending VLAN indicator.
17. The method of controlling the duplication of the packet of claim 13, wherein:
the non-contiguous range encoding includes a most significant bit (MSB) portion of a Virtual Local Area Network (VLAN) indicator and a bitmap decoded from a least significant bit (LSB) portion of the VLAN indicator.
18. The method of controlling the duplication of the packet of claim 13, wherein:
the discrete encoding includes a first Virtual Local Area Network (VLAN) indicator and a second VLAN indicator.
19. The method of controlling the duplication of the packet of claim 13, wherein:
the selecting the format of descriptors includes configuring in response to control bits.
20. A means for controlling a duplication of a packet, comprising:
a means for receiving the packet;
a means for accessing a first pointer;
a means for accessing a second pointer;
a means for accessing a descriptor in response to the second pointer; and
a means for applying an encoding for the duplication of the packet.